

## Department of Energy

### Ohio Field Office Fernald Area Office

P. O. Box 538705  
Cincinnati, Ohio 45253-8705  
(513) 648-3155



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SEP 21 1999

Mr. James A. Saric, Remedial Project Manager  
U.S. Environmental Protection Agency  
Region V, SRF-5J  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

DOE-1131-99

Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5<sup>th</sup> Street  
Dayton, OH 45402-2911

Dear Mr. Saric and Mr. Schneider:

### TRANSMITTAL OF THE AUGUST 1999 MONTHLY REPORT FOR IMPACTED MATERIAL PLACEMENT AT THE ON-SITE DISPOSAL FACILITY

Enclosed for your information is the August 1999 Monthly Report for Impacted Material Placement at the On-Site Disposal Facility (OSDF). The following information is included:

- Air monitoring sampling data - August 1999 readings from the OSDF, Southern Waste Units (SWUs), and Sewage Treatment Plan (STP)
- Placement graphs for:
  - Daily soil to debris ratio
  - August Cat 1 soil placement with projected September placement
  - August Debris placement with projected September placement
  - August Total placement with projected September placement
- Current surface plan views - Cell 1 and Cell 2 plan views showing the current lift of impacted material as of August 27, 1999
- OSDF cross sections - Selected cross sections looking north and west showing placement progress and projections for September 30, 1999

Mr. James A. Saric  
Mr. Tom Schneider

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Summary:

Approximately 66,500 in-place cubic yards were placed June 8, 1999, through August 27, 1999. This volume is based on surveyed quantities.

The current surface plans for Cell 1 and Cell 2 show the category of impacted material placed at each grid. The latest lift is noted on the grid along with the volume of that lift and the date it was surveyed. Grids with the same lift number will not necessarily contain the same category of material.

A limited amount of impacted material was placed in Cell 1. Category 5 material was placed in trenches per the Impacted Material Placement Plan. The Category 5 placement location is shown on Cross Section G-G' of the enclosure. Placement in the catchment area was also initiated in late August.

The majority of material was placed in Cell 2. Planned placement for Cell 2 included two lifts of Category 2 material followed by an intervening layer. Field conditions, however, did not allow this to happen for all situations. Availability of a specific category of material, drainage issues, and timing of material to the cell all effect the placement of impacted material.

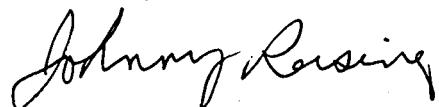
The pattern of two lifts of Category 2 material followed by an intervening layer and then two more lifts of Category 2 was followed for the following grids: H8, I8, J8, I9, G9, J10, I10, H10, and E10 in Cell 2.

In some grids an extra lift of select material was placed on the existing 2-foot thick select material to ensure safe Category 2 placement. This application applied to grids D8, D9, E9, J9, F10, G10, G11, H11, I11, and J11 in Cell 2.

Category 4 was placed above two consecutive lifts or between lifts of Category 2 in selected grids. This method was used for grids: J8, G8, F8, E8, F9, H9, and J9 in Cell 2.

If you have any questions or concerns regarding this document, please contact Jay Jalovec at (513) 648-3122.

Sincerely,



Johnny W. Reising  
Fernald Remedial Action  
Project Manager

FEMP:Jalovec

Enclosure

Mr. James A. Saric  
Mr. Tom Schneider

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cc w/enclosure:  
N. Hallein, EM-42/CLOV  
G. Jablonowski, USEPA-V, SRF-5J  
T. Schneider, OEPA - Dayton (three copies of enclosure)  
F. Bell, ATSDR  
M. Schupe, HSI GeoTrans  
R. Vandegrift, ODH  
F. Barker, Tetra Tech  
AR Coordinator, FDF/78

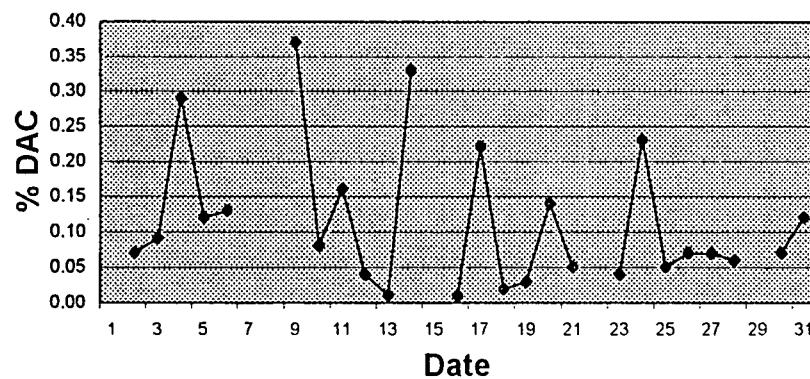
cc w/o enclosure:  
J. Reising, OH/FEMP  
J. Jalovec, OH/FEMP  
R. J. Janke, OH/FEMP  
A. Tanner, OH/FEMP  
J. Burnett, Geosyntec  
D. Carr, FDF/52-2  
J. Chiou, FDF/52-0  
T. Hagen, FDF/65-2  
J. Harmon, FDF/90  
R. Heck, FDF/2  
M. Hickey, FDF/64  
S. Hinnefeld, FDF/31  
A. Klimek, FDF/64  
U. Kumthekar, FDF/64  
C. VanArsdale, FDF/64  
T. Walsh, FDF/65-2  
ECDC, FDF/52-7

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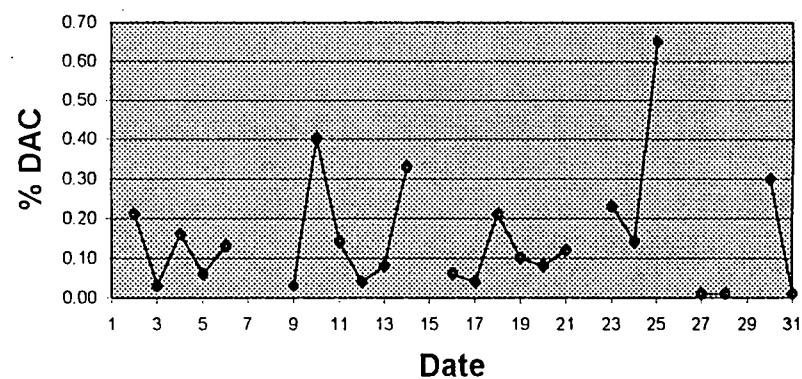
SEWAGE TREATMENT PLANT BOUNDARY AIR SAMPLES - AUGUST 1999

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
N.E. BNDY	0.07	0.09	0.29	0.12	0.13			0.37	0.08	0.16	0.04	0.01	0.33		0.01	0.22	0.02	0.03	0.14	0.05		0.04	0.23	0.05	0.07	0.07	0.06		0.07	0.12	
N.W. BNDY	0.21	0.03	0.16	0.06	0.13			0.03	0.40	0.14	0.04	0.08	0.33		0.06	0.04	0.21	0.10	0.08	0.12		0.23	0.14	0.65	0.01	0.01		0.30	0.01		
S.E. BNDY	0.07	0.15	0.09	0.13	0.25			0.29	0.07	0.13	0.10	0.01	0.38		0.32	0.28	0.13	0.17	0.02	0.28		0.02	0.37	0.12	0.20	0.31	0.12		0.07	0.12	
SP-7	0.04	0.24	0.24	0.28	0.07			0.16	0.37	0.23	0.13	0.64		0.24	0.31	0.23	0.12	0.66		0.13	0.10	0.10	0.08	0.13							

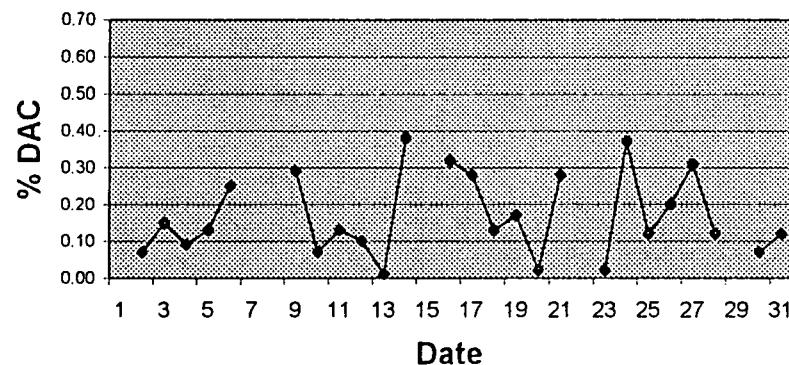
STP - Northeast Boundary



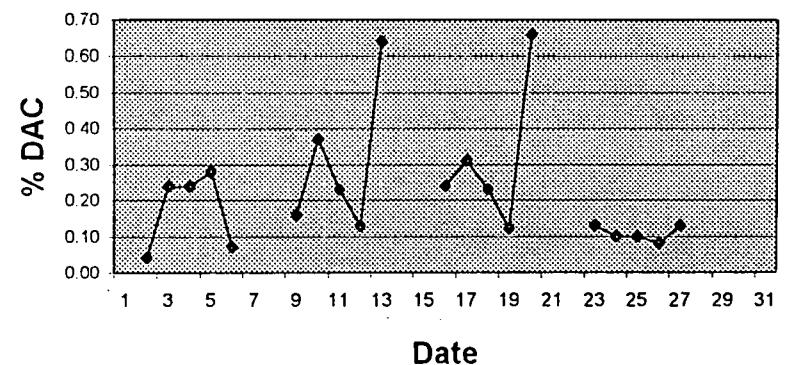
STP - Northwest Boundary



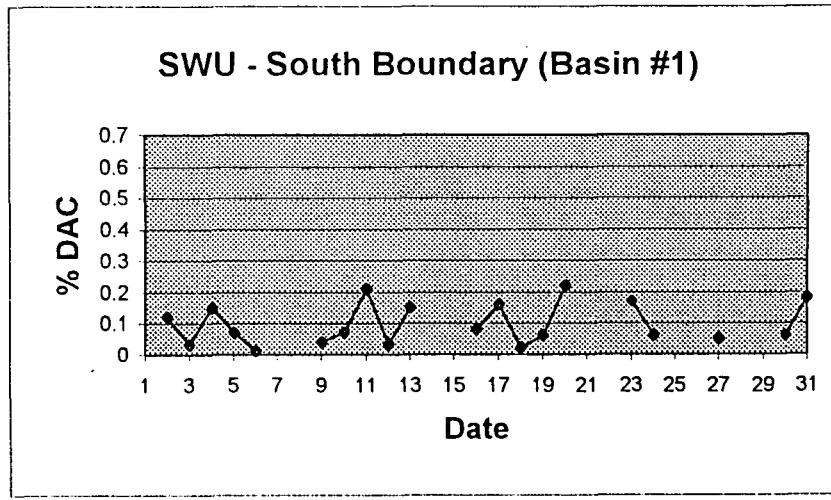
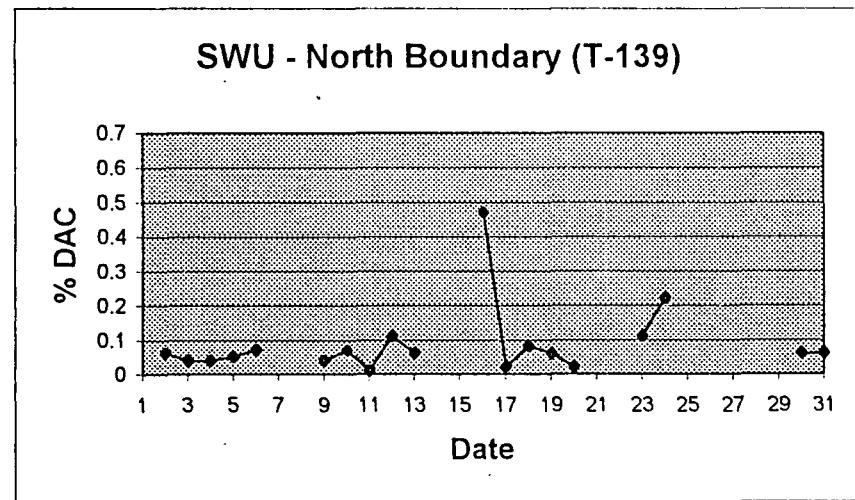
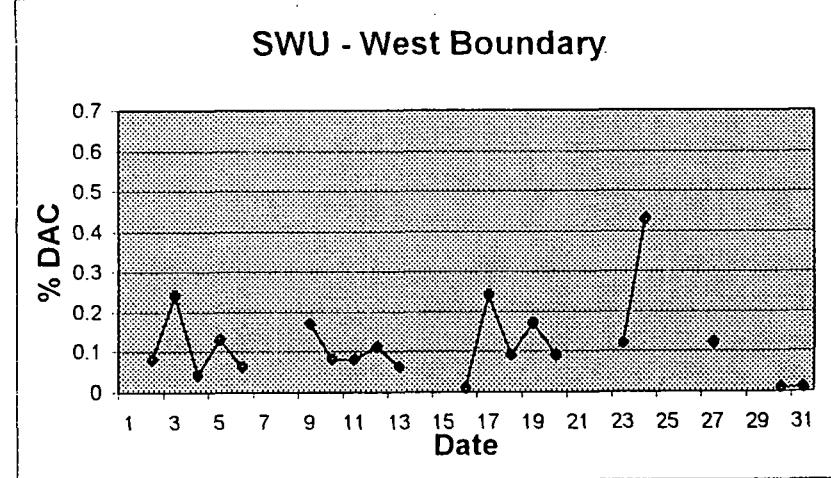
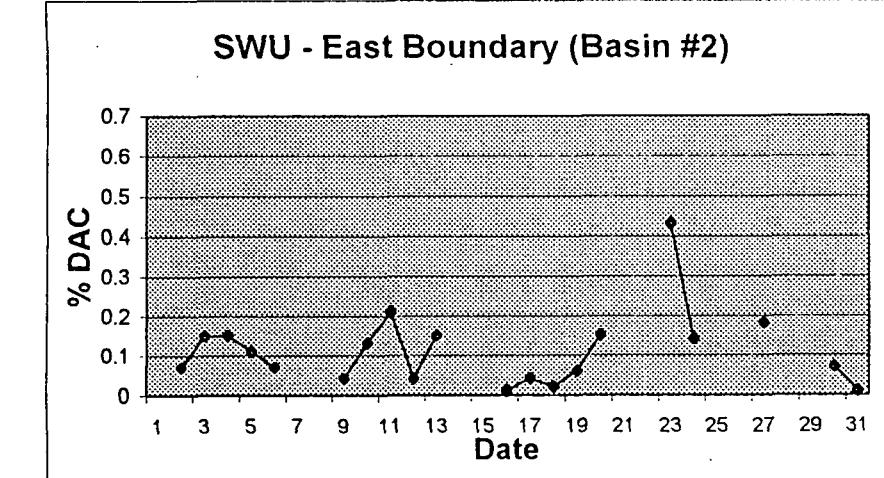
STP - Southeast Boundary



SP-7 Boundary (Average)



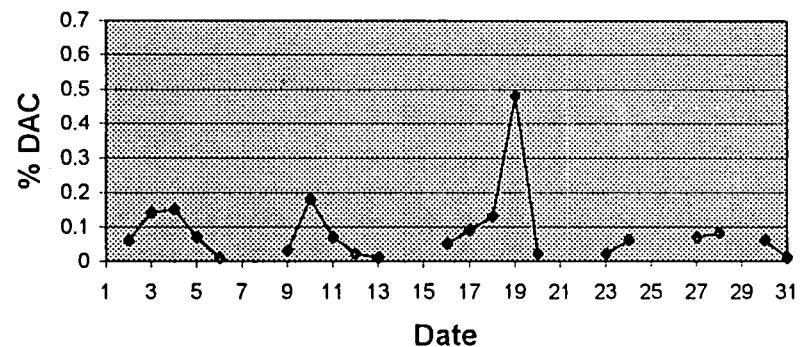
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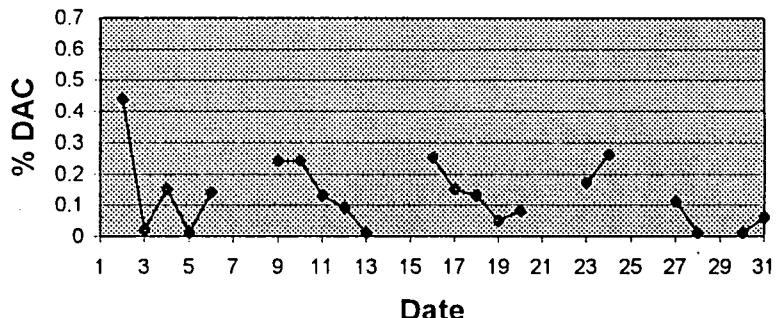
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Day	OSDF BOUNDARY AIR SAMPLES - AUGUST 1999																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
N. BNDY	0.06	0.14	0.15	0.07	0.01			0.03	0.18	0.07	0.02	0.01			0.05	0.09	0.13	0.48	0.02			0.02	0.06			0.07	0.08		0.06	0.01
S. BNDY	0.44	0.02	0.15	0.01	0.14			0.24	0.24	0.13	0.09	0.01			0.25	0.15	0.13	0.05	0.08			0.17	0.26			0.11	0.01		0.01	0.06
E. BNDY	0	0.02	0.15	0.06	0.01			0.03	0.01	0.13	0.03	0.07			0.05	0.15	0.01	0.05	0.08			0.04	0.1			0.12	0.01		0.01	0.05
W. BNDY	0	0.02	0.02	0.06	0.01			0.1	0.12	0.01	0.03	0.07			0.25	0.09	0.04	0.05	0.02			0.1	0.06			0.01	0.13		0.06	0.06
S. RAMP								0.03							0.1	0.11			0.02										0.01	0.08

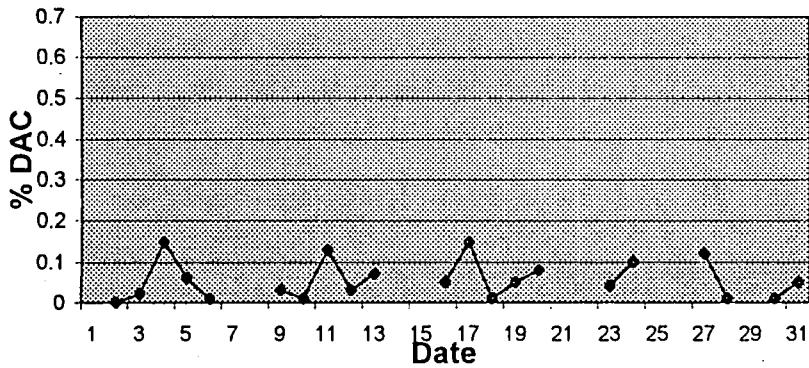
OSDF - North Boundary



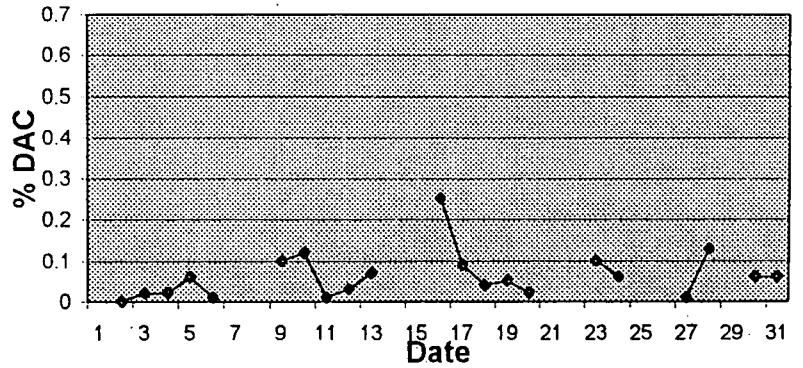
OSDF - South Boundary



OSDF - East Boundary

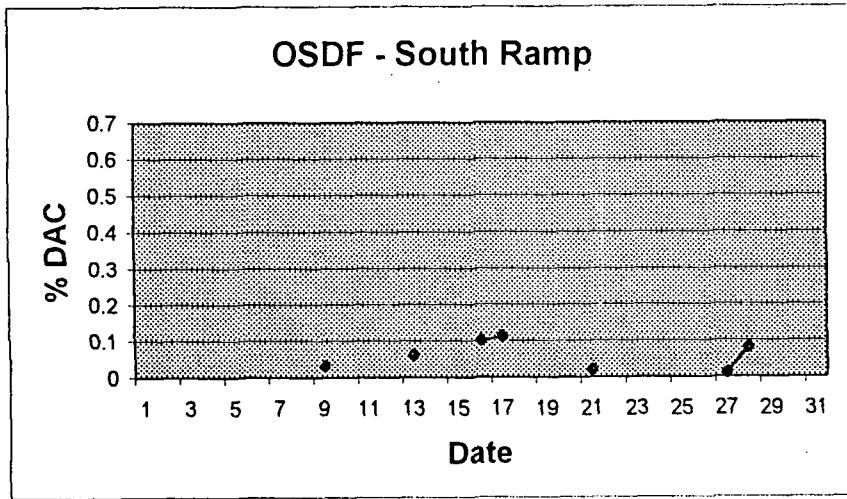


OSDF - West Boundary



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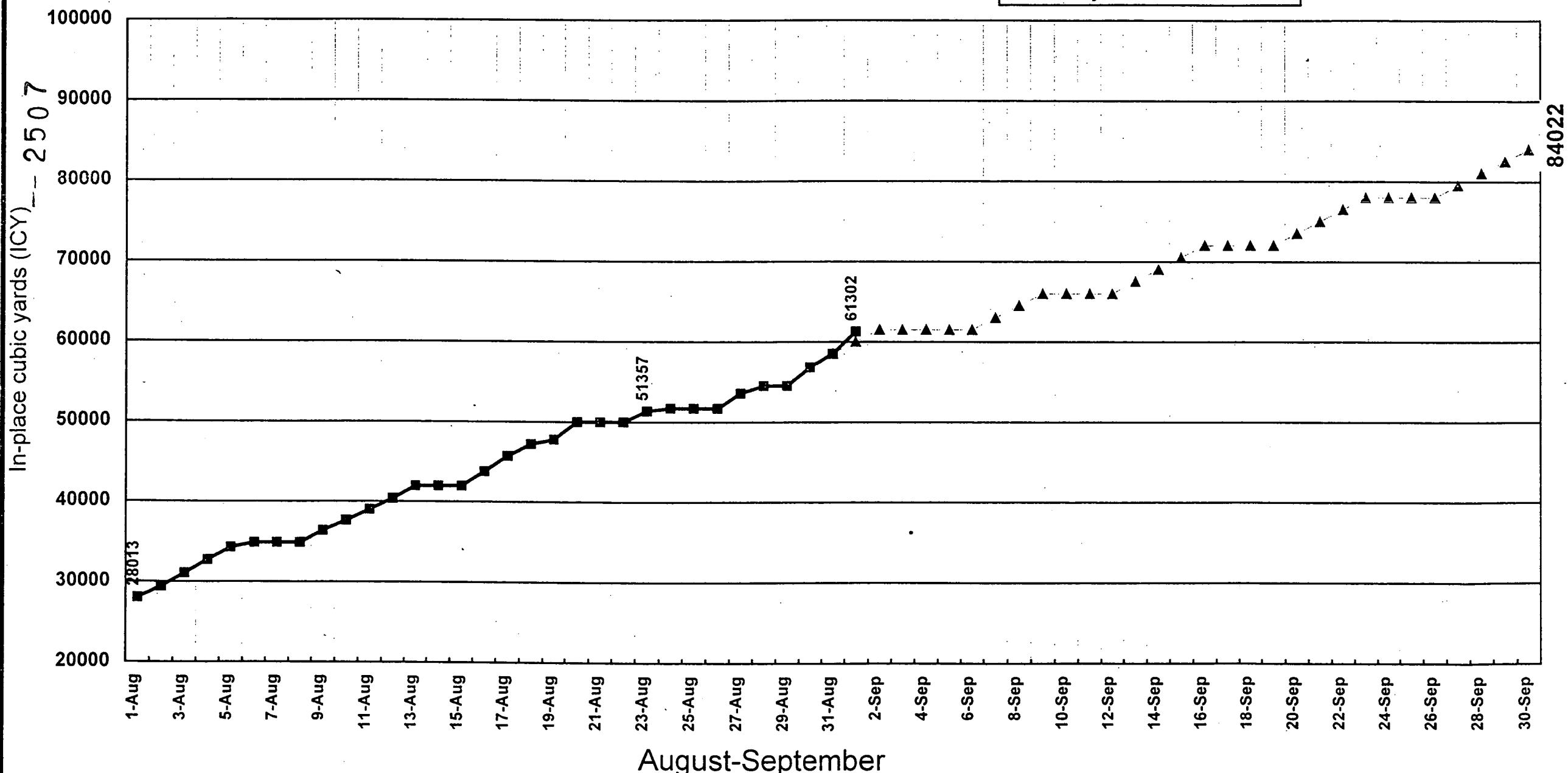
Action level for radiological (occupational) air monitoring is 2% DAC. Isotope of concern is U-238; associated DAC is 2E-11 uCi/ml.

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# CAT 1 Soil Placement

Actual Soil Placement  
Projected Soil Placement

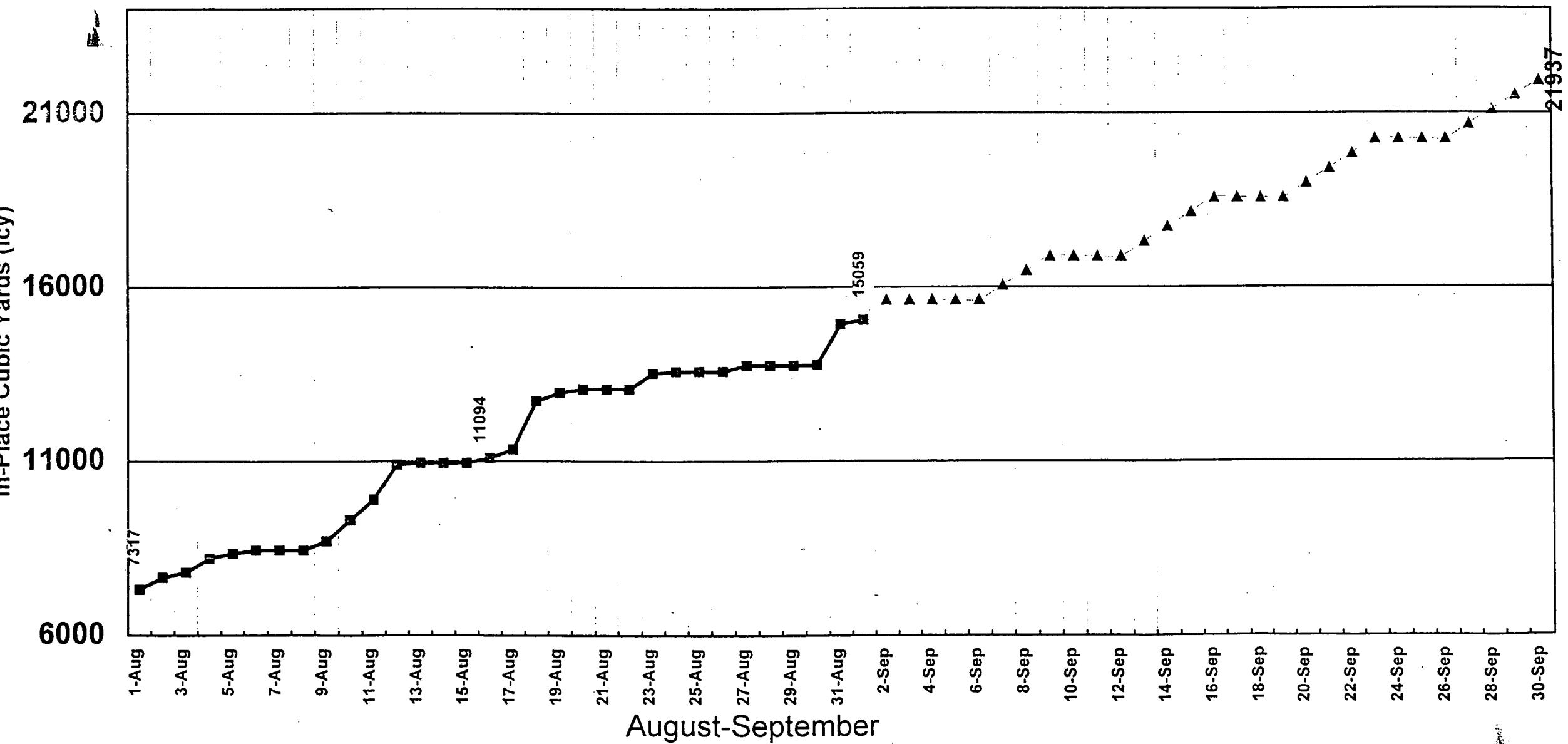
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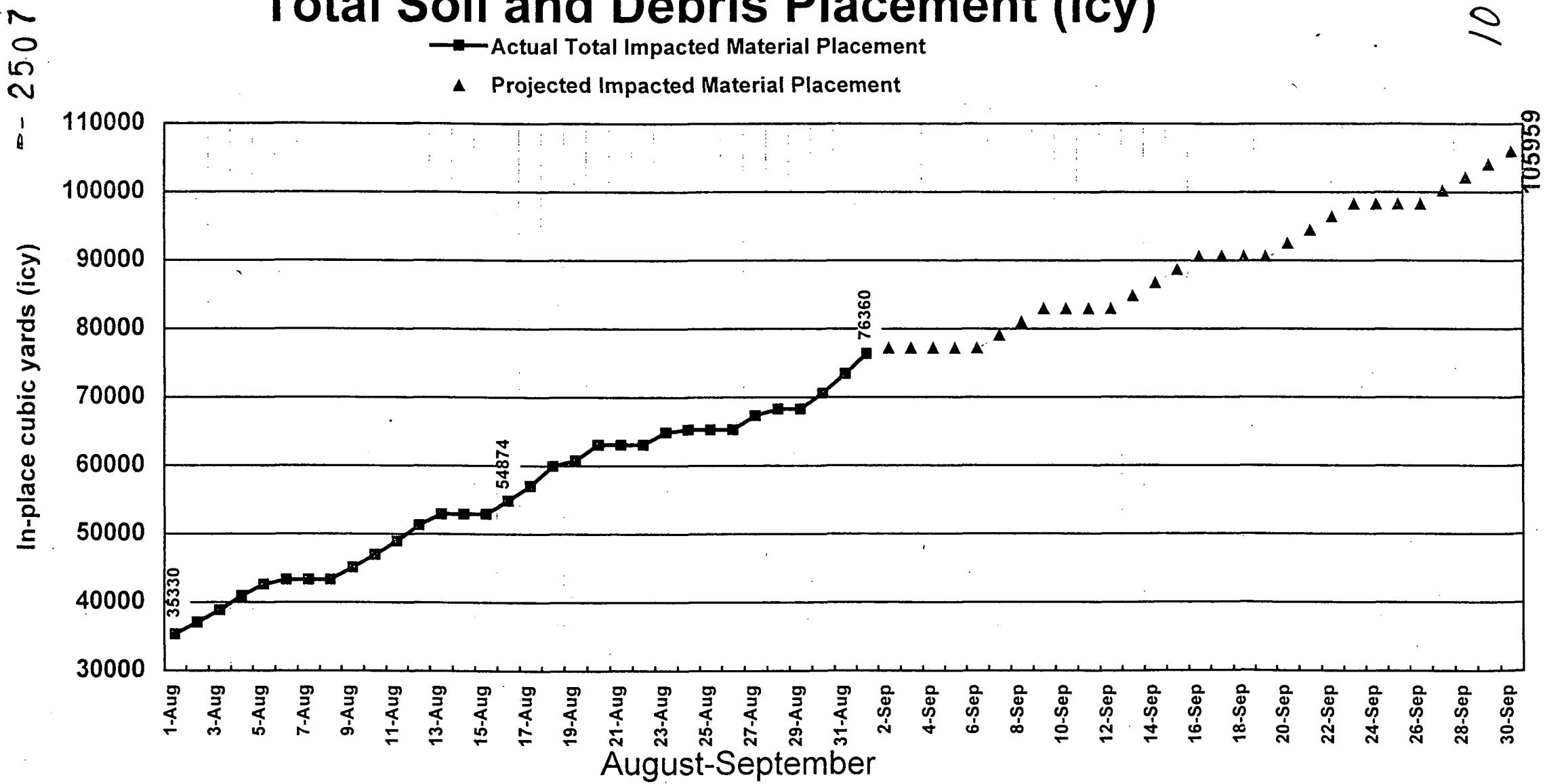
August-September

# Debris Placement

- Actual Debris Placement- CAT 2-5
- ▲ Projected Debris Placement CAT 2-5



# Total Soil and Debris Placement (icy)



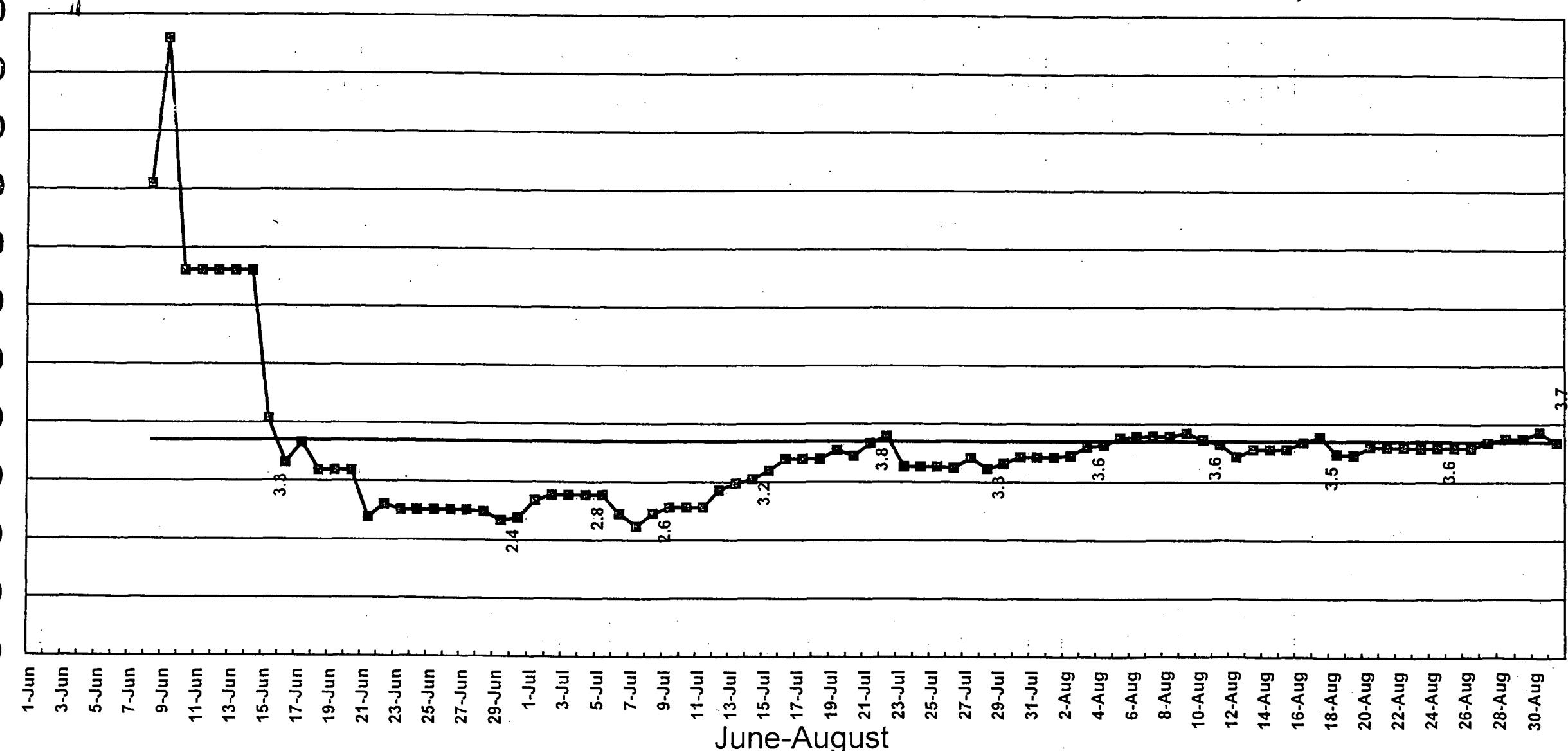
# Soils to Debris Ratio

■ Soils to Debris Ratio

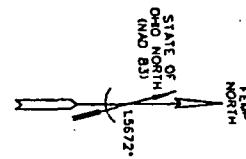
— Projected Soils to Debris Ratio (3.7:1)

//

SOIL TO DEBRIS RATIO



# OSDF GRID KEY PLAN



14,B	13,B	12,B	11,B	10,B	9,B	8,B	7,B	6,B	5,B	4,B	3,B	2,B
14,C	13,C	12,C	11,C	10,C	9,C	8,C	7,C	6,C	5,C	4,C	3,C	2,C
14,D	13,D	12,D	11,D	10,D	9,D	8,D	7,D	6,D	5,D	4,D	3,D	2,D
14,E	13,E	12,E	11,E	10,E	9,E	8,E	7,E	6,E	5,E	4,E	3,E	2,E
14,F	13,F	12,F	11,F	10,F	9,F	8,F	7,F	6,F	5,F	4,F	3,F	2,F
CELL 3			CELL 2			CELL 1						
14,G	13,G	12,G	11,G	10,G	9,G	8,G	7,G	6,G	5,G	4,G	3,G	2,G
14,H	13,H	12,H	11,H	10,H	9,H	8,H	7,H	6,H	5,H	4,H	3,H	2,H
14,I	13,I	12,I	11,I	10,I	9,I	8,I	7,I	6,I	5,I	4,I	3,I	2,I
14,J	13,J	12,J	11,J	10,J	9,J	8,J	7,J	6,J	5,J	4,J	3,J	2,J
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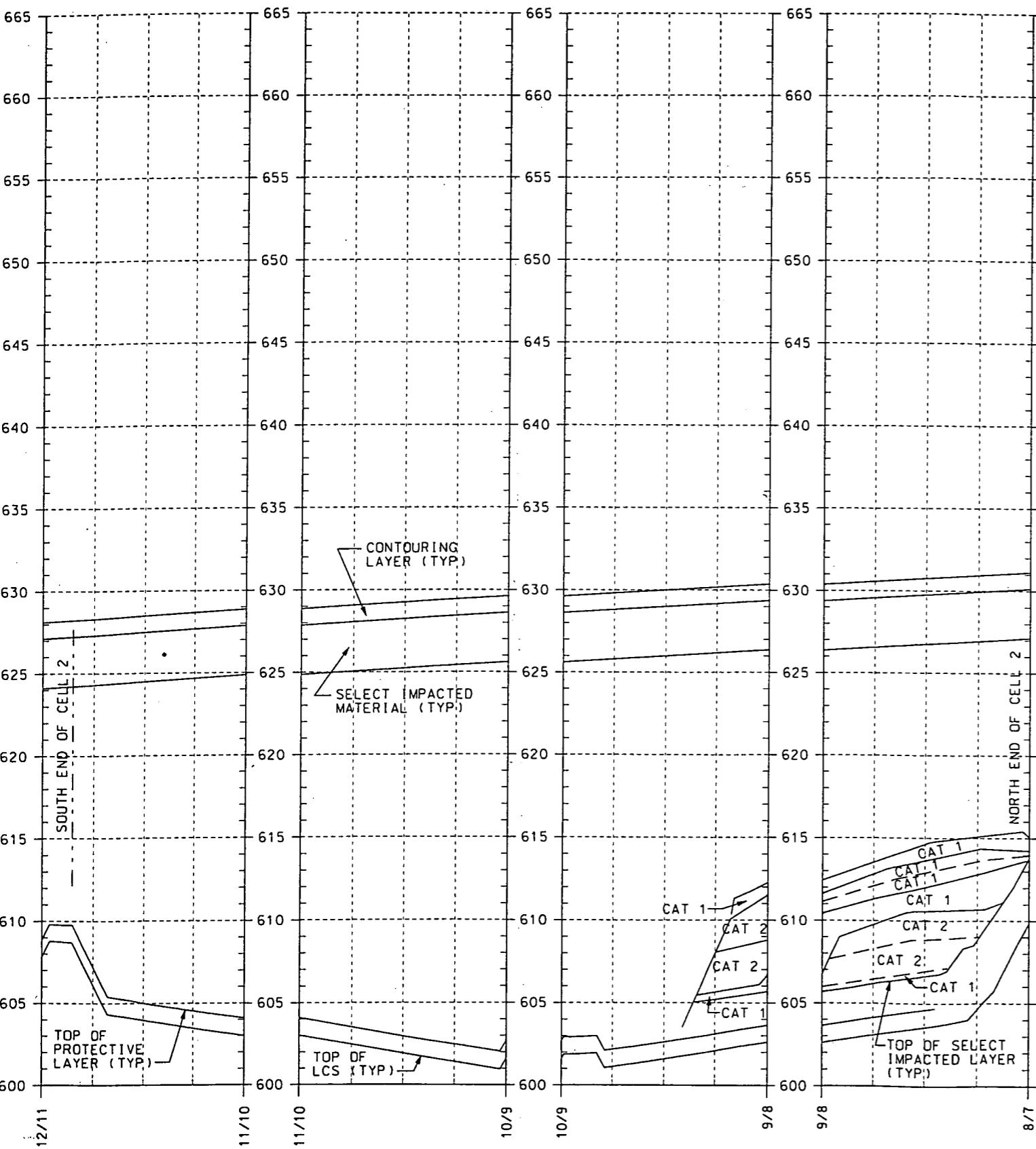
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APPROXIMATE LOCATION OF  
INTERCELL BERM (TYP.)

APPROXIMATE  
LIMIT OF WASTE (TYP.)

## LOOKING WEST CELL 2



GRID D/11

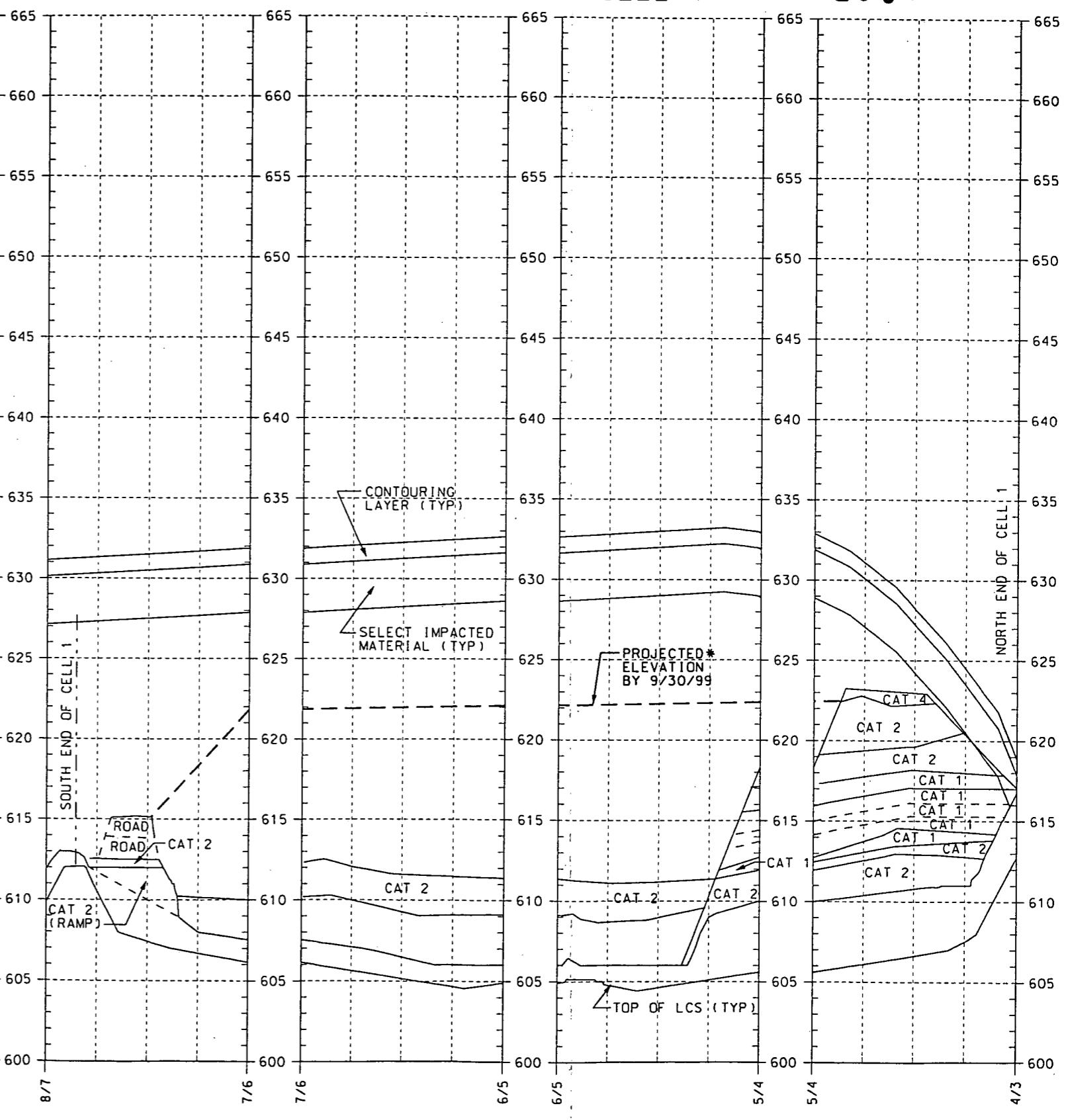
GRID D/10

GRID D/9

REVISED 8/30/99 (8/27/99 SURVEY)

## LOOKING WEST CELL 1

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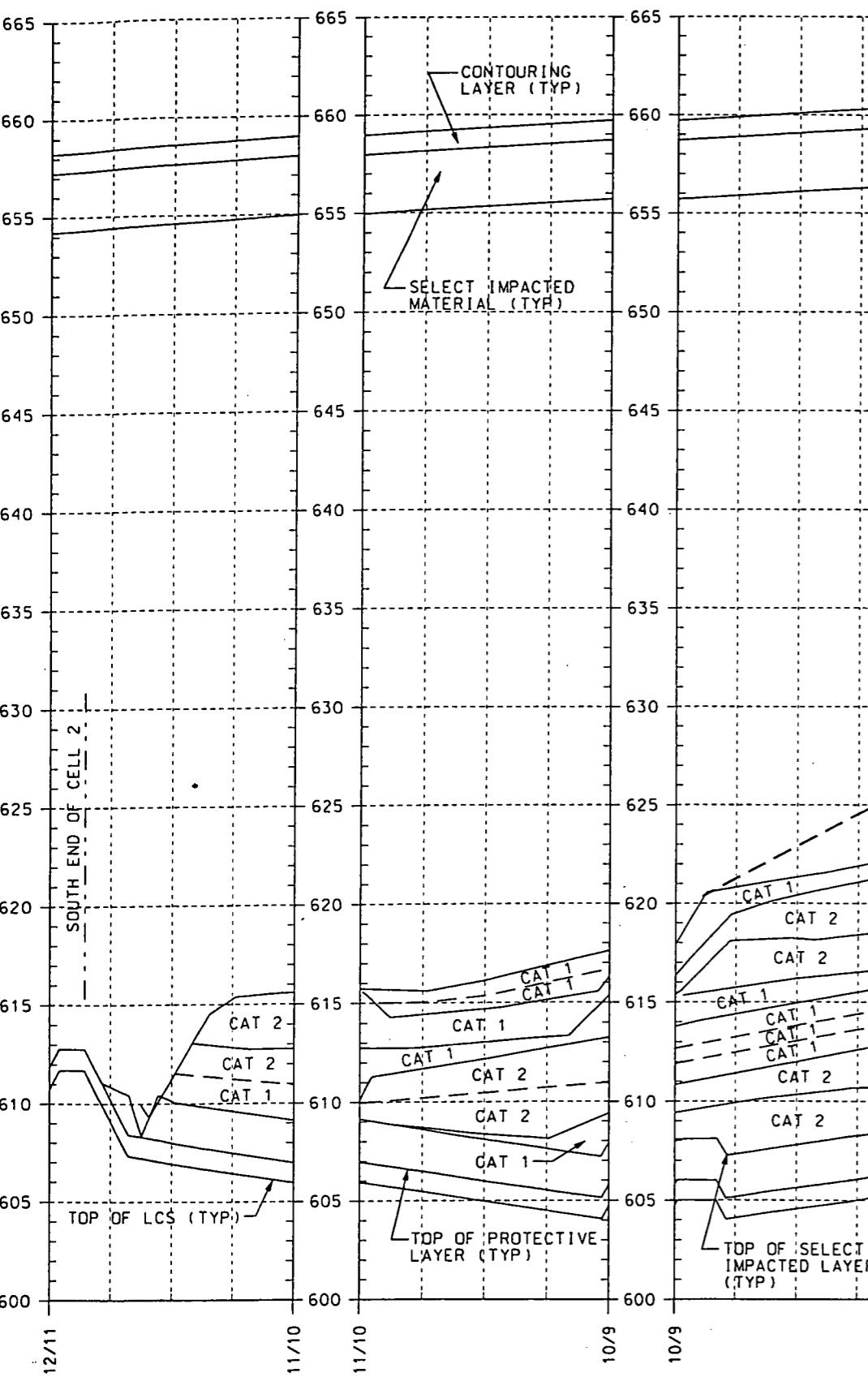
GRID D/5

GRID D/4

REVISED 8/23/99 (8/20/99 SURVEY)

\* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

## LOOKING WEST CELL 2



GRID G/11

GRID G/10

GRID G/9

GRID G/8

GRID G/7

GRID G/6

GRID G/5

GRID G/4

REVISED 8/30/99 (8/27/99 SURVEY)

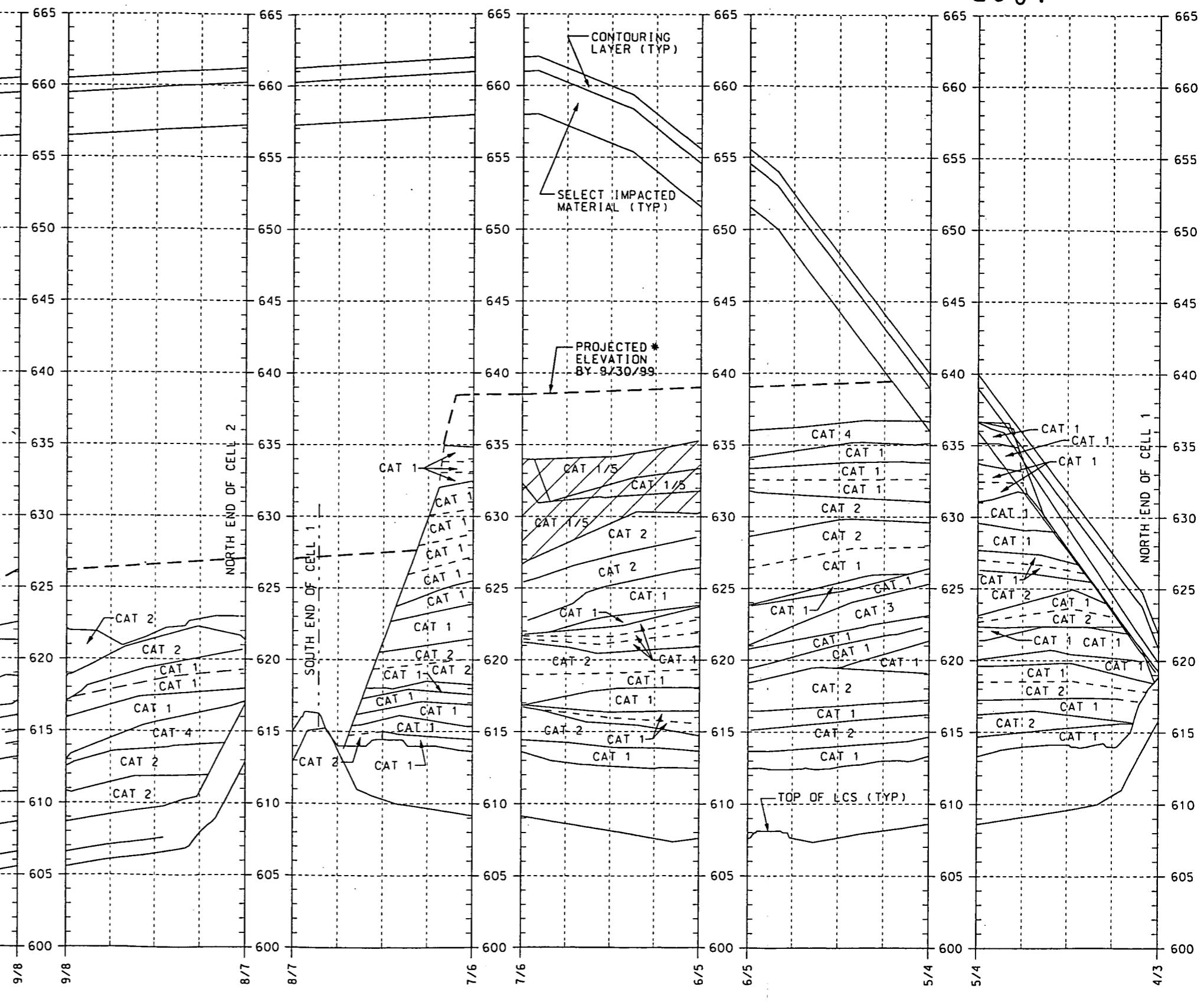
SECTION G-G'

REVISED 8/30/99 (8/27/99 SURVEY)

\* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

## LOOKING WEST CELL 1

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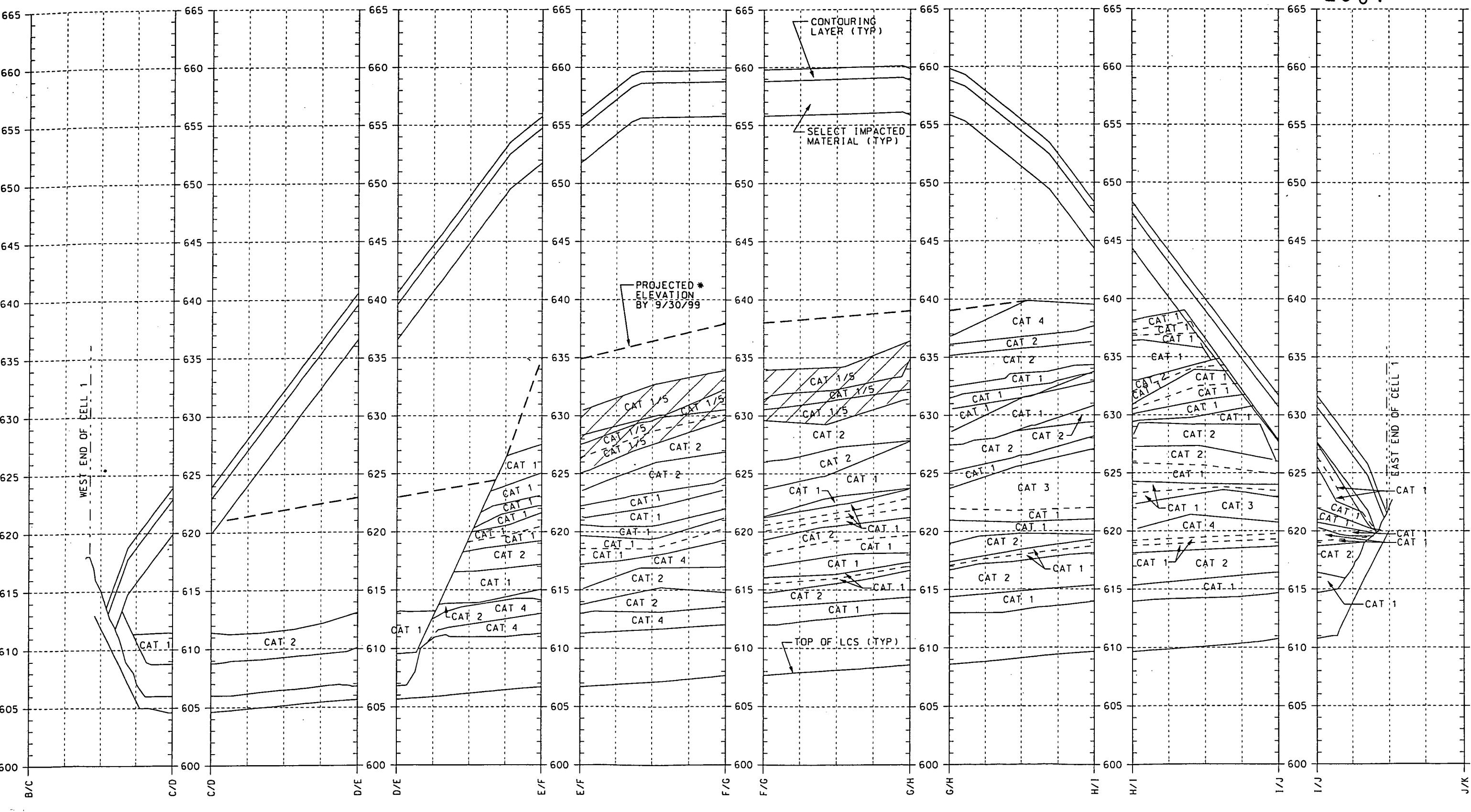


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LOOKING NORTH CELL 1

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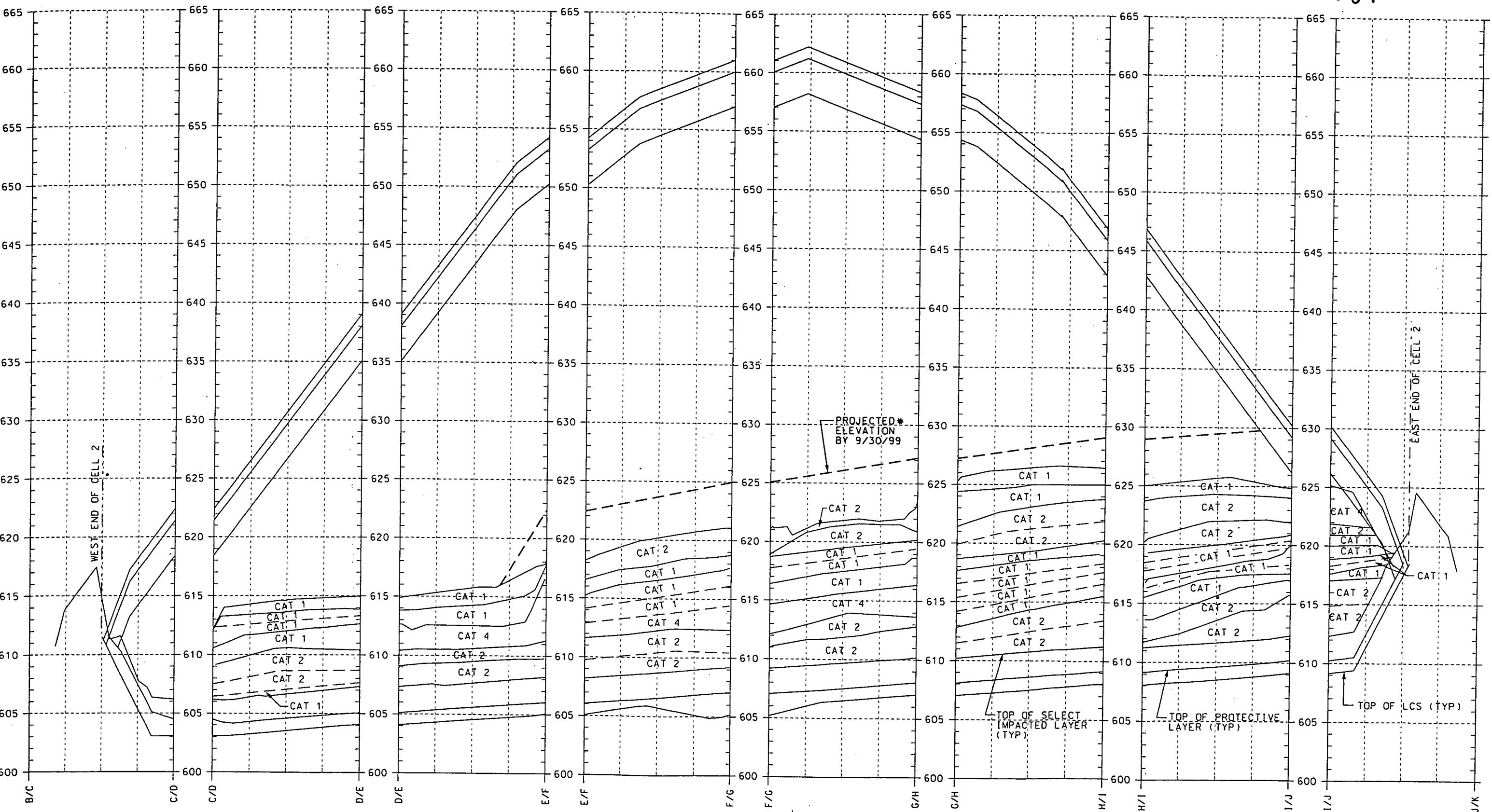
\* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

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LOOKING NORTH CELL 2

2507



GRID C/8

GRID D/8

GRID E/8

GRID F/8

GRID G/8

GRID H/8

GRID I/8

GRID J/8

\* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

SECTION 8-8'  
REVISED 8/30/99 (8/27/99 SURVEY)

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